

CLAIMS

1. An optical modulator comprising a substrate consisting of a material having an electrooptic effect, an optical waveguide provided on said substrate, control electrodes for controlling the phase of light being guided through said optical waveguide, and a recess in the surface of said substrate where the control electrodes are formed, characterized in that the control electrode being formed on said recess is provided with a stress relaxing means.
2. The optical modulator as claimed in Claim 1, characterized in that said stress relaxing means configures said control electrode on the recess thinner than the control electrodes on the non-recess.
3. The optical modulator as claimed in any of Claims 1 and 2, characterized in that said stress relaxing means configures said control electrode on the recess thinner than the depth of the recess.
4. The optical modulator as claimed in any of Claims 2 and 3, characterized in that the thickness of said control electrode on the recess is 30000 to 500 Å.
5. The optical modulator as claimed in Claim 1, characterized in that said stress relaxing means creates a space between the substrate surface where said recess is formed and said control electrode on the recess.
6. The optical modulator as claimed in any of Claims 1 to 5, characterized in that said stress relaxing means forms said control electrode on the recess in the shape of a stripe or a lattice.

7. The optical modulator as claimed in Claim 1, characterized in that said stress relaxing means configures said control electrode on the recess to be a thin line for connecting the control electrodes formed on the non-recess next to said recess.

8. The optical modulator as claimed in any of Claims 1 to 7, characterized in that said substrate comprises the direction of a crystal axis which can change a refractive index in a vertical direction to the substrate surface in the most effective manner by the electrooptic effect.

9. The optical modulator as claimed in any of Claims 1 to 8, characterized in that said control electrode comprises a modulating electrode and a grounding electrode, and said stress relaxing means is formed on the grounding electrode.